

Work Order ID 139914

Monday, December 14, 2015 1:48:15 PM

139914

Rev A Draw 5/7/01/07
~~PRELIMINARY ISSUE~~

Page 1

Item ID: D5326-043 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: PRELIM POSITIVE RECALL Stop ***NS2***
 Item Name: Rib Assembly
 Start Date: 12/14/2015 Start Qty: 1.00 ***1*** Cust Item ID:
 Required Date: 12/14/2015 Req'd Qty: 1.00 ***1*** Customer:
 Reference:

Approvals: Process Plan: MCS Date: DEC 14 2015 Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D5326	AS <u>Rev A Draw 5/7/01/07</u>								
100	Weld per dwg A/R S.S. rod Batch: <u>4133414</u>	0.00							
100									
Large Fab	Memo	0.00							
Large Fab	1- Cut D5326-3 as per dwg 2- Drill holes as per dwg D5332 using DT10195 3- Remove identification marks and deburr 4- Weld bushing and end cap in rib as per dwg and grind flush								
110	QC10- Inspect visual per QSI004- ground welds	0.00							
110									
QC	Memo	0.00							
Quality Control									
120	QC5- Inspect part completeness to step on W/O	0.00							
120									
QC	Memo	0.00							
Quality Control									

1x **DAS 43 9-89** **JAN 04 2016**

1 **DAS 24 9-89** **JAN 04 2016**

1 **DAS 24 9-89** **JAN 04 2016**

POSITIVE RECALL

EFFECTIVE DEC 14 2015

RELEASED 5 AUTH MCS DATE 12/02/07

Rev A Draw 5/7/01/07 2015-1016-01

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QS1042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐							
		OTHER : ☐							

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PRELIMINARY ISSUE

Page 2

Item ID: D5326-043 Accept ***N900040100*** Setup Start ***NS1***
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Start Date: 12/14/2015 Start Qty: 1.00 ***1*** Cust Item ID:
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Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130	Identify as per dwg & Stock Location: <i>www</i>	0.00							
130						<i>1x</i>	DAS 43 9-89		JAN 04 2016
Packaging	Memo	0.00							
Packaging	***STOCK IN BASKET CELL***								
140	QC21 - Final Inspection - Work Order Release	0.00							
140									
QC	Memo	0.00							
Quality Control									

16-4-11

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :			MRB (QSI042) Approval
Description Work Order Deviation		Disposition			Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : ☐					

Picklist Print

Monday, December 14, 2015 1:48:18 PM

PRELIMINARY ISSUE

Page 1

Work Order ID: 139914

139914

Parent Item: D5326-043

D5326-043

Parent Item Name: Rib Assembly

Start Date: 12/14/2015

Required Date: 12/14/2015

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP REV:A 15.10.15 NEW ISSUE DD VERF:JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

D5327-15 *D5327-15*		Manufactured	No				Each	0.0000	1			DAS 43 9-89	JAN 04 2016
------------------------	--	--------------	----	--	--	--	------	--------	---	--	--	-------------------	-------------

D5338-1 *D5338-1*		Manufactured	No				Each	4.0000	2			DAS 43 9-89	JAN 04 2016
----------------------	--	--------------	----	--	--	--	------	--------	---	--	--	-------------------	-------------

Location Loc Qty Loc Code

prelim	4	
138122	4	
	f	610.8802

1.894737

✓ M304TS0.500W.049

Purchased

No

M304TS0 500W 049

Square Tubing

Location Loc Qty Loc Code

WA004	610.88021	
M132210	21.88021	
M133592	589	

**B133592 + 2 feet DAS 43 9-89 DEC 23 2015

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

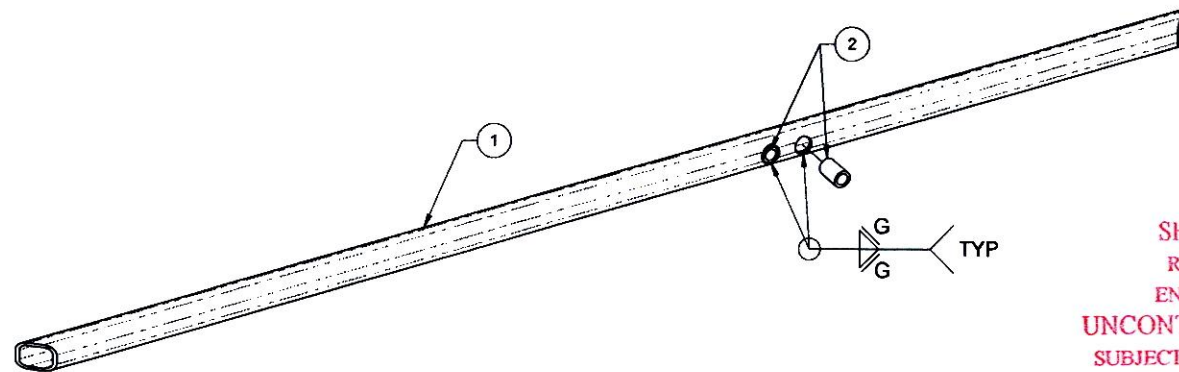
QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Description Work Order Deviation		Disposition			
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
		OTHER :			

PRELIMINARY ISSUE

ITEM	QTY .041	P/N	DESCRIPTION
	X	D5326-041	RIB ASSEMBLY
1	1	D5326-1	RIB
2	2	D5338-1	BUSHING



D5326-041 RIB ASSEMBLY

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 1399.14 MJS

1512-14

NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY PER DART QSI 044 6.6
- 7) WEIGHT: 0.49 lbs
- 8) WELD PER QSI 004

PRELIMINARY ISSUE

A	NEW ISSUE	RF	15.08.10
REV.	DESCRIPTION	BY	DATE
DESIGN	RF		
DRAWN	RF		
CHECKED	AK		
MFG. APPR.	DD		
APPROVED			
DE APPR.			
DATE	15.08.10		

DART AEROSPACE LTD
HAWKESBURY, ONTARIO, CANADA

DRAWING NO.
D5326

TITLE
RIB ASSEMBLY

REV. A5

SHEET 1 OF 4

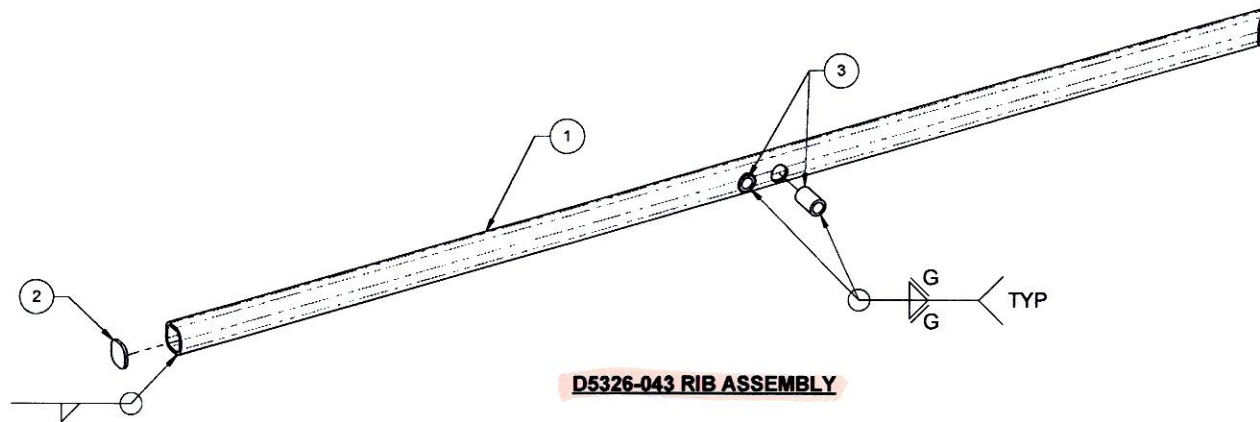
SCALE

NTS

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PRELIMINARY ISSUE

ITEM	QTY -043	P/N	DESCRIPTION
	X	D5326-043	RIB ASSEMBLY
1	1	D5326-3	RIB
2	1	D5327-15	CAP
3	2	D5338-1	BUSHING



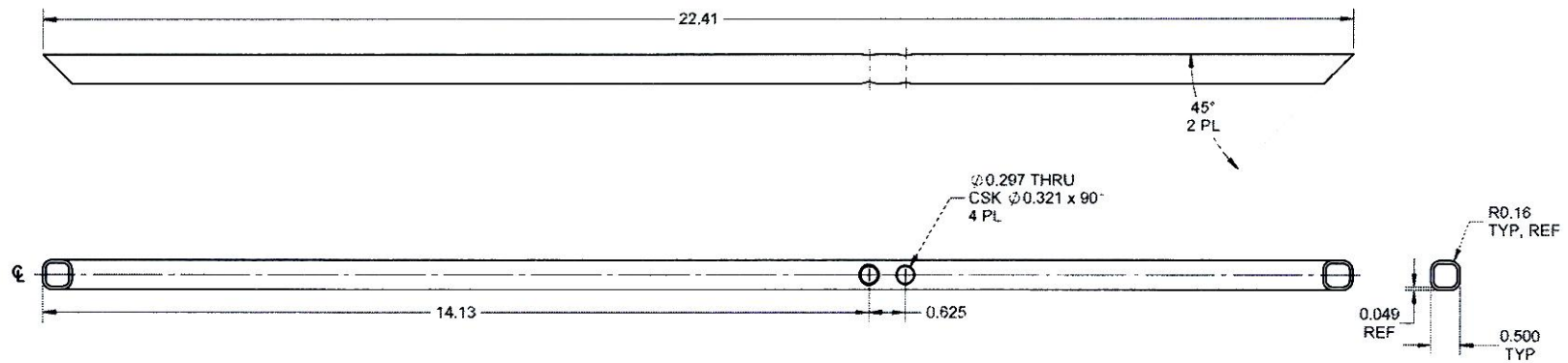
NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY PER DART QSI 044 6.6
- 7) WEIGHT: 0.47 lbs
- 8) WELD PER QSI 004

PRELIMINARY ISSUE

DESIGN	RF	DART AEROSPACE LTD	
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA	
CHECKED	AK	DRAWING NO.	REV. A5
MFG. APPR.	DD	D5326	SHEET 2 OF 4
APPROVED		TITLE	SCALE
DE APPR.		RIB ASSEMBLY	NTS
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PRELIMINARY ISSUE



D5326-1 RIB

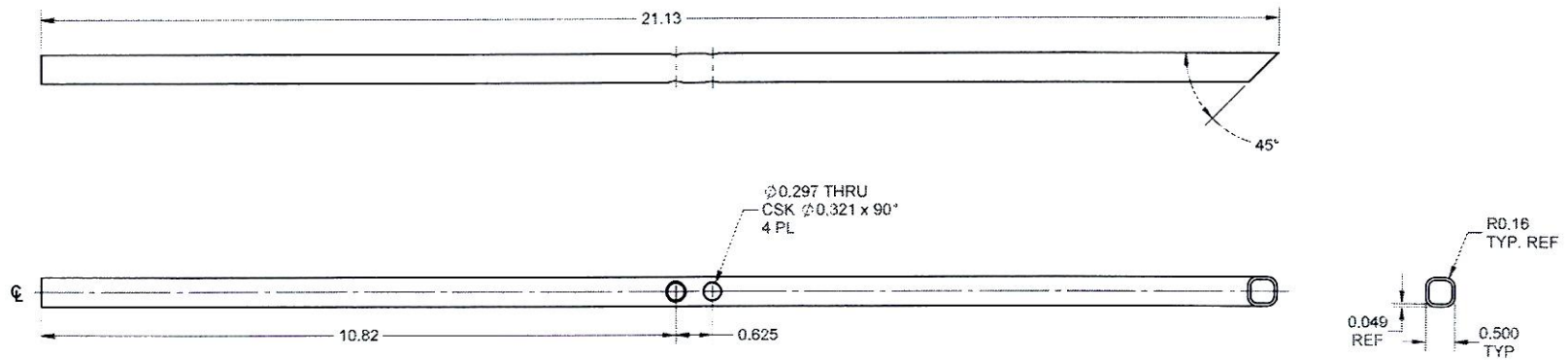
NOTES:

- 1) MATERIAL: AISI 304/316 SEAMLESS STAINLESS STEEL SQUARE TUBE, 0.50 X 0.50 X 0.049 WALL
PER ASTM A554 MILL FINISH OR ASTM A269 MILL FINISH
REF DART SPEC. M304TS0.500W.049
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: 0.48 lbs

PRELIMINARY ISSUE

DESIGN	RF	DART AEROSPACE LTD	
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA	
CHECKED	AK	DRAWING NO.	REV. A5
MFG. APPR.	DD	D5326	SHEET 3 OF 4
APPROVED		TITLE	SCALE
DE APPR.		RIB ASSEMBLY	NTS
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PRELIMINARY ISSUE



D5326-3 RIB

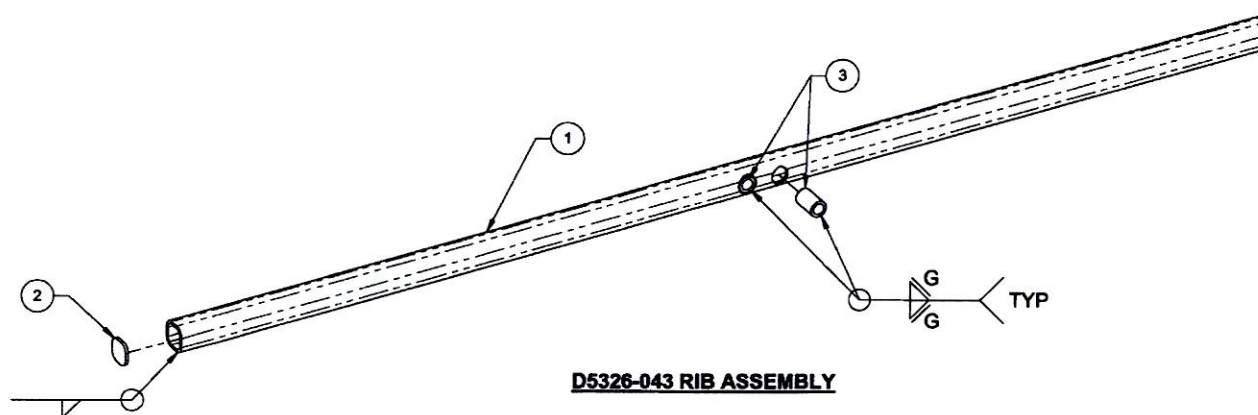
NOTES:

- 1) MATERIAL: AISI 304/316 SEAMLESS STAINLESS STEEL SQUARE TUBE, 0.50 X 0.50 X 0.049 WALL
PER ASTM A554 MILL FINISH OR ASTM A269 MILL FINISH
REF DART SPEC. M304TS0.500W.049
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: 0.46 lbs

PRELIMINARY ISSUE

DESIGN	RF	DART AEROSPACE LTD	
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA	
CHECKED	AK	DRAWING NO.	REV. A5
MFG. APPR.	DD	D5326	SHEET 4 OF 4
APPROVED		TITLE	SCALE
DE APPR.		RIB ASSEMBLY	NTS
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ITEM	QTY -043	P/N	DESCRIPTION
	X	D5326-043	RIB ASSEMBLY
1	1	D5326-3	RIB
2	1	D5327-15	CAP
3	2	D5338-1	BUSHING



D5326-043 RIB ASSEMBLY

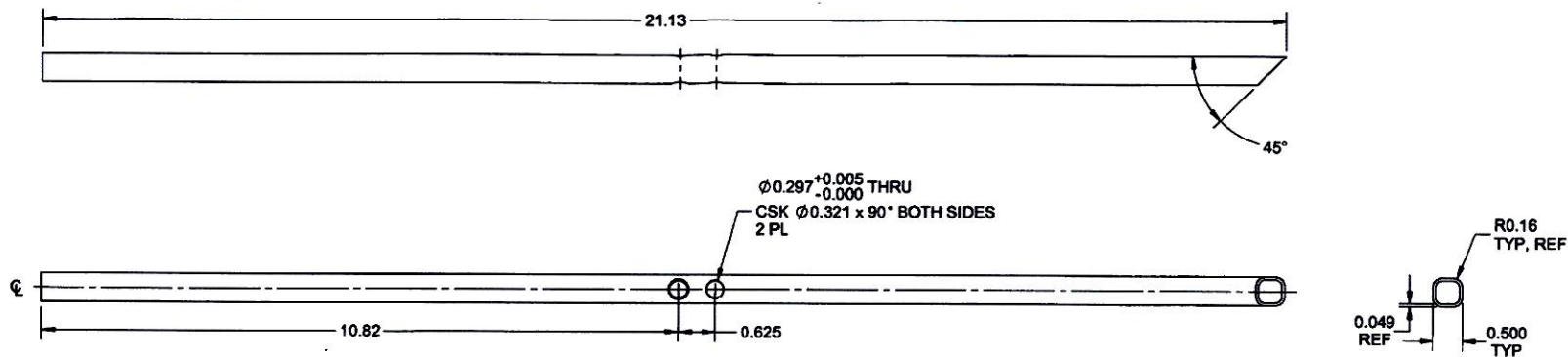
NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY PER DART QSI 044 6.6
- 7) WEIGHT: 0.47 lbs
- 8) WELD PER QSI 004

RELEASED
2016-01-21

APPROVED

DESIGN	RF	DART AEROSPACE LTD	
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA	
CHECKED	VS	DRAWING NO.	REV. A
MFG. APPR.	DD	D5326	SHEET 2 OF 4
APPROVED	HS	TITLE	SCALE
DE APPR.	DS	RIB ASSEMBLY	NTS
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PER ASTM A554 MILL FINISH OR ASTM A269 MILL FINISH
REF DART SPEC. M304TS0.500W.049
- 2) FINISH: NONE
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- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: 0.46 lbs

RELEASED
2016-01-21

APPROVED

DESIGN	RF	DART AEROSPACE LTD	
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA	
CHECKED	VS	DRAWING NO.	REV. A
MFG. APPR.	DD	D5326	SHEET 4 OF 4
APPROVED	HS	TITLE	SCALE
DE APPR.	DS	RIB ASSEMBLY	NTS
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